

Fellowship Reference: Nano_PD1

Main research field: Chemistry

Sub-research field: Nanotechnology

Job summary:

REQUIMTE offers Post-Doc fellowships to undertake research, which will be focused on the synthesis and assessment of the toxicological and biodistribution properties of nanoparticles. The main objective is to study the impact of shape, size, material and surface chemistry of nanoparticles in the toxicological effects of nanoparticles. Applicants should hold a PhD degree in the area of expertise and a good publication record.

Job description:

The work to be developed is the synthesis of metal and metal oxide nanoparticles with controlled size/shape/and surface chemistry, characterization of the nanoparticles, and study of the interaction of nanoparticles with serum proteins. We are seeking highly motivated individuals with proven experience (at a PhD level) in any of these areas and that can contribute to enhance and complement our research interests.

The candidate must have experience as researcher in nanoparticle synthesis and surface modification, as well as characterization techniques for nanoparticles (specially TEM, SEM, AFM, DLS, fluorescence and UV/vis spectroscopy).

Fellowship Reference: Nano_PD2_1

Main research field: Chemistry

Sub-research field: Nanochemistry and Nanotechnology

Job summary:

REQUIMTE offers Post-Doc fellowships to undertake research which will be focused on the preparation, functionalization and characterisation of nanomaterials and nanostructured materials for catalytic applications and adsorption/separation. These materials comprise magnetic nanocatalysts, hybrid nanocatalysts prepared by immobilization of homogeneous catalysts onto nanomaterials and porous MOF materials. Applicants should hold a PhD degree in the area of expertise and a good publication record.

Job description:

The main focus will be the design of eco-friendly hybrid nanocatalysts for liquid-phase oxidation reactions using green oxidants and featuring high activity, selectivity and recyclability oxidants and the design of novel crystalline porous MOF materials with improved adsorption properties and gas storage capacity. We are seeking for highly motivated individuals with proven experience (at a PhD level) in any of these areas and that can contribute to enhance and complement our research interests. The candidate must have experience as researcher in material synthesis, catalysis and characterization by spectroscopic techniques, electron microscopy, surface techniques, powder XRD, thermal methods.

Fellowship Reference: Nano_PD2_2

Main research field: Chemistry

Sub-research field: Nanochemistry and Nanotechnology

Job summary:

REQUIMTE offers Post-Doc fellowships to undertake research which will be focused on the fabrication of high-tech smart textiles for protection and decoration purposes and the fabrication of rigid and flexible electrochromic devices (ECDs) with high performance in terms of stability/durability, contrast ratio and response time. Applicants should hold a PhD degree in the area of expertise and a good publication record.

Job description:

The work to be developed is focus on the fabrication of high-tech smart textiles with superhydro/oleophobicity, fire retardancy, thermal insulation, photochromic and/or thermochromic properties through their multifunctionalization with nanomaterials and the preparation of novel electrochromic rigid and flexible devices. We are seeking highly motivated individuals with proven experience (at a PhD level) in any of these areas and that can contribute to enhance and complement our research interests. The candidate must have experience as researcher in material synthesis and characterization by spectroscopic techniques, electron microscopy, surface techniques, powder XRD, thermal methods.

Fellowship Reference: Nano_PD3_11

Main research field: Chemistry

Sub research field: Nanochemistry and Nanotechnology

Job summary:

REQUIMTE offers Post-Doc fellowships to undertake research in the area of Nanochemistry and Nanotechnology, aiming the preparation and functionalization of multipurpose nanostructures applied to the exploitation of new analytical strategies.

Job description:

The multi-disciplinary nature of this work includes different scientific areas namely Physical Chemistry, Physics, Biophysics and Analytical chemistry. We are seeking highly motivated individuals with proven experience in any of these areas that can contribute to enhance and complement our research interests in the area of Nanochemistry and Nanostructured Materials.

The main focus will be in the synthesis and characterization of distinct nanostructures (liposomes, quantum dots, biosilica nanoparticles) with diverse techniques (TEM, SEM, AFM, SAXS, WAXS, GIXD, DSC, DLS, ELS, IRRAS) that will be used for appropriate tailoring of the developed nanostructures.

Candidates should have research experience equivalent to a PhD in Chemistry, Pharmaceutical Chemistry, Physics and Biophysics. Applicants with documented expertise in the above cited areas will have priority.

The work will be conducted at REQUIMTE - Associated Laboratory for Green Chemistry (www.requimte.pt).

Fellowship Reference: Nano_PD_CeNTI

Main research field: Chemistry

Sub-research field: Nanochemistry and Nanotechnology

Job summary:

REQUIMTE offers Post-Doc fellowships to undertake research at CeNTI – Centre for Nanotechnology and Smart Materials which will be focused on the development of smart textiles and organic electronic devices. Applicants should hold a PhD degree in the area of expertise and a good publication record.

Job description:

The work to be developed is the functionalization of textile materials through the incorporation of different nanomaterials into textile substrates and design and fabrication of novel rigid and flexible electrochromic devices. The development of electrochromic devices include the optimisation of formulations and the study of deposition processes with different coating techniques available at CeNTI facilities namely printing techniques (ink-jet and screen), knife coating, slot-die, dipping, engraved roller, between other. We are seeking highly motivated individuals with proven experience (at a PhD level) in any of these areas and that can contribute to enhance and complement our research interests.

The candidate must have experience as researcher in materials chemistry and in techniques for the characterization of developed materials (contact angle measurements, UV-Vis and luminescence spectroscopy, electrochemical techniques, X-ray diffraction, SEM, AFM, and other appropriate).

Fellowship Reference: Nano_PD4

Main research field: Chemistry

Sub research field: Nanochemistry

Job summary:

REQUIMTE offers a Post-Doc fellowship in the area of Nanochemistry, theme Computer Modelling of Heterogeneous Catalysis. Applicants should hold a PhD degree in the areas of Chemistry, Physics, Materials Science, and Chemical Engineering, as well as a good publication record.

Job description:

The main goal will be the rational design of smart catalytic materials, using advanced computational modelling tools. This will involve developing an advanced multi-scale modelling approach starting from electronic structure calculations proceeding via force-field approaches towards larger systems and longer simulations where the important details are included indirectly, essentially for tackling the water-gas-shift reaction and attempt to propose efficient metal nanoparticles/nanostructured metal oxide catalysts, as well as for understanding the interplay between structure, electronics, and dynamics taking place at the transition metal complexes grafted onto nanoporous supports in catalytic applications.

The successful candidate will be integrated in a multidisciplinary research group actively involved in the design of (1) nanocatalysts for the water-gas-shift reaction and of (2) anchored transition metal complexes with improved enantioselective catalytic activity. Work will be conducted in an excellent environment with state-of-the-art facilities.

We are seeking highly motivated individuals with proven experience (at a PhD level) in any of these areas and that can contribute to enhance and complement our research interests.

The candidate must have experience as researcher in electronic structure calculations (e.g.: DFT) or/and Molecular Dynamics simulations.